

Slate Hall Farm

Transport and Highway Assessment evidence for Policy S/SHF Site Allocation

22090/N04

April 2026

## 1 INTRODUCTION

### 1.1 Overview

- 1.1.1 The emerging Greater Cambridge Local Plan allocates land on the A14 corridor to help meet the area's need for employment development, industrial and logistic space in particular.
- 1.1.2 Under *Policy S/SHF: Land north of A1307, Bar Hill (Slate Hall Farm)* 'the Site' is identified for an employment-led development that responds to the local landscape, and secures access to new green infrastructure for future workers and the local community. The draft policy states that the development will provide a range of logistics and industrial uses which can support the long-term needs of residents and businesses in Greater Cambridge.
- 1.1.3 The location of the Site is presented in **Figure 1**.

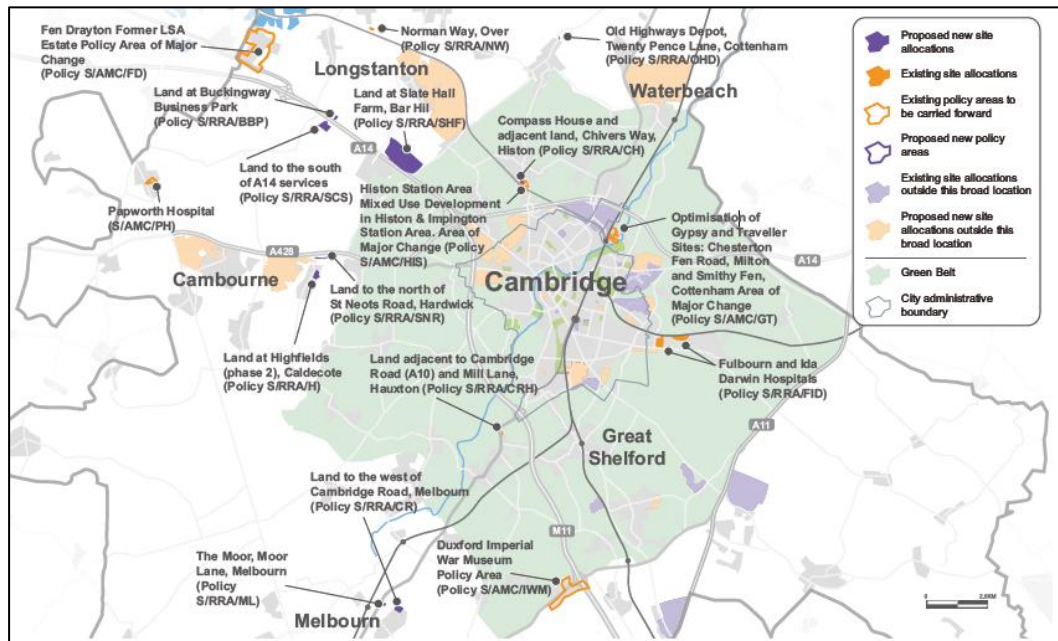


Figure 1 - Location of Site within Rest of Rural Area Site Allocations and Policy Areas

## 1.2 Purpose of Note

1.2.1 The Evidence Base to support the Greater Cambridge Local Plan is under development. This Transport Note has been requested by the Greater Cambridge Shared Planning Service to provide Site specific transport detail to support the emerging Evidence Base for the Site.

1.2.2 The main matters covered by this Transport Note are:

- Details relating to the vehicular access consideration of the Site;
- Indicative strategy for delivering a vision-led development that supports the transport user hierarchy;
- Sustainable Travel Strategy for the Site;
- The role and definition of a Trip Budget for the allocation;
- The effects of the Trip Budget on the surrounding highway network, assessed via traffic modelling; and
- Detail on the transport infrastructure strategy and associated Monitor and Manage approach which can be used to inform the Infrastructure Delivery Plan (IDP) and can be used for subsequent modelling assessments and which might support the Greater Cambridge Local Plan Evidence Base.

1.2.3 The aim of this Transport Note is to provide transport planning evidence to support the allocation of the Site within the Greater Cambridge Local Plan. It should be read alongside the emerging Spatial Framework and Greater Cambridge Local Plan Evidence Base.

## 2 DEVELOPMENT AT SLATE HALL FARM

### 2.1 Proposed use allocation

2.1.1 The GCLP Development Strategy and emerging Site allocation policy (S/SHF) identifies the Site for approximately 240,000 sqm GIA of new employment / commercial uses. The uses would provide a flexible range of units that can support a wide range of businesses and that can be adapted to accommodate changing business requirements.

2.1.2 The following uses classes are identified in the policy:

- Class B2 (General Industrial);
- Class B8 (Storage or Distribution) serving local needs; and
- Supporting amenities to meet the needs of staff.

2.1.3 In addition, a new parkland and amenity spaces, for people working and visiting the Site is identified in the policy.

### 2.2 Movement

2.2.1 The emerging policy identifies a range of requirements associated with connectivity and transport that the Site needs to consider including the need to secure active travel and public transport improvements, to ensure sustainable access to the Site for workers and local residents and that the Site integrates successfully with the transport network.

2.2.2 The identified movement measures within the policy are:

- New and improved active travel infrastructure;
- A Mobility Hub;
- Maximising opportunities for sustainable last mile deliveries through cargo bikes, e-vehicles and other sustainable modes;
- Safe and adequate road access and access to the Strategic Road Network; and
- A Trip Budget with Monitor and Manage approach throughout the delivery of the Site.

### 2.3 Access Arrangements

2.3.1 Two points of vehicle access are considered desirable to provide access to / egress from the Site and is the preferred approach. For operational purposes, the ability to access and egress that Site from two locations would allow for instances such as emergencies. The A1307 connects to the Site and affords an appropriate location to provide vehicular access. The existing access to the industrial estate from Dry Drayton Road would be retained.

2.3.2 Pedestrian and cycle access to the Site will be provided at new access points on the southwest boundary of the Site and via Bridleway 151/10 to the north of the Site. All active travel accesses will integrate with the existing high-quality shared-user paths on the A1307 and the existing PRow network.

2.3.3 The locations of these access points are identified in **Figure 2**.



Figure 2 – Site access arrangements

2.3.4 Pedestrian and cycle movements throughout the Site will be facilitated by a network of internal shared-user surfaces connecting with each building and mobility hub. These will include the following design features:

- Highly permeable layout for pedestrians/cyclists accessing the Site from Bar Hill, Northstowe/Longstanton, Oakington, the Guided Busway and North Cambridge. Shared-user paths will integrate with Bridleway 151/10 that passes through the Site and the shared-user surface along the A1307 to facilitate these routes.
- The main internal spine road will have shared-user paths of 3.5m-4m in width throughout.
- Pedestrians and cyclists will be given priority at all internal junctions, using Copenhagen style crossings where appropriate. Junction and crossing designs will be confirmed at the Reserved Matters stage.
- Footpaths will be created at the northeast of the Site, intended for leisure use.

2.3.5 Both Site access junctions from the A1307 will be traffic signal controlled to help maximise capacity and work in conjunction with the existing A1307/A1050 signalised junctions. The designs will incorporate segregated Pegasus crossing facilities for equestrians and separate Toucan crossings for pedestrians and cyclists to cross the Site access roads.

2.3.6 **Figure 3** and **Figure 4** present both the A1307 Site access junctions. Whilst the final detailed design of these junctions would be expected to be controlled via condition this shows design already well evolved to a stage demonstrating a successful solution here.

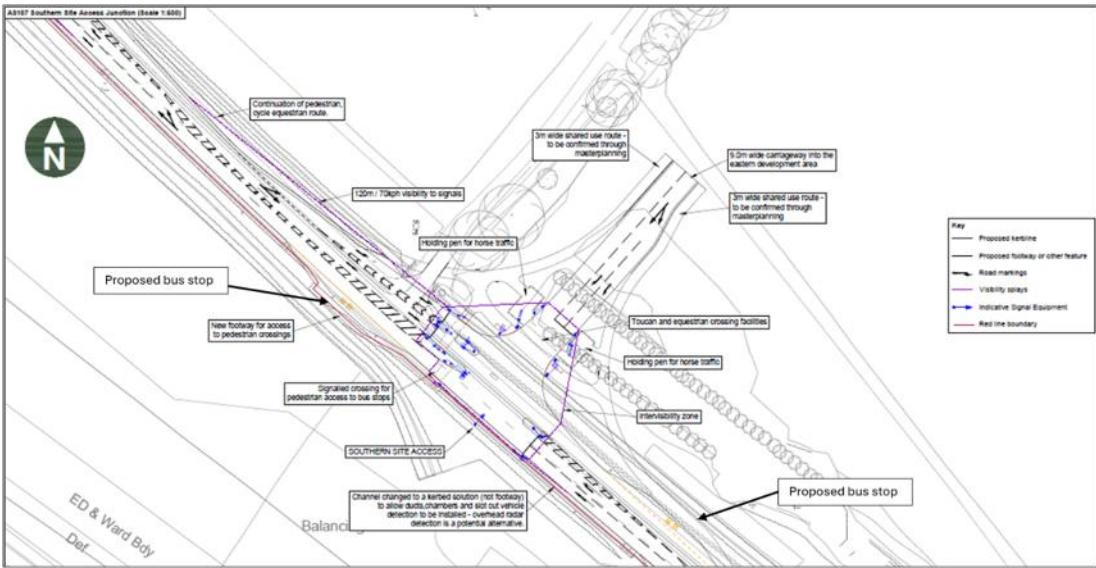


Figure 3 – A1307 Southern Site access

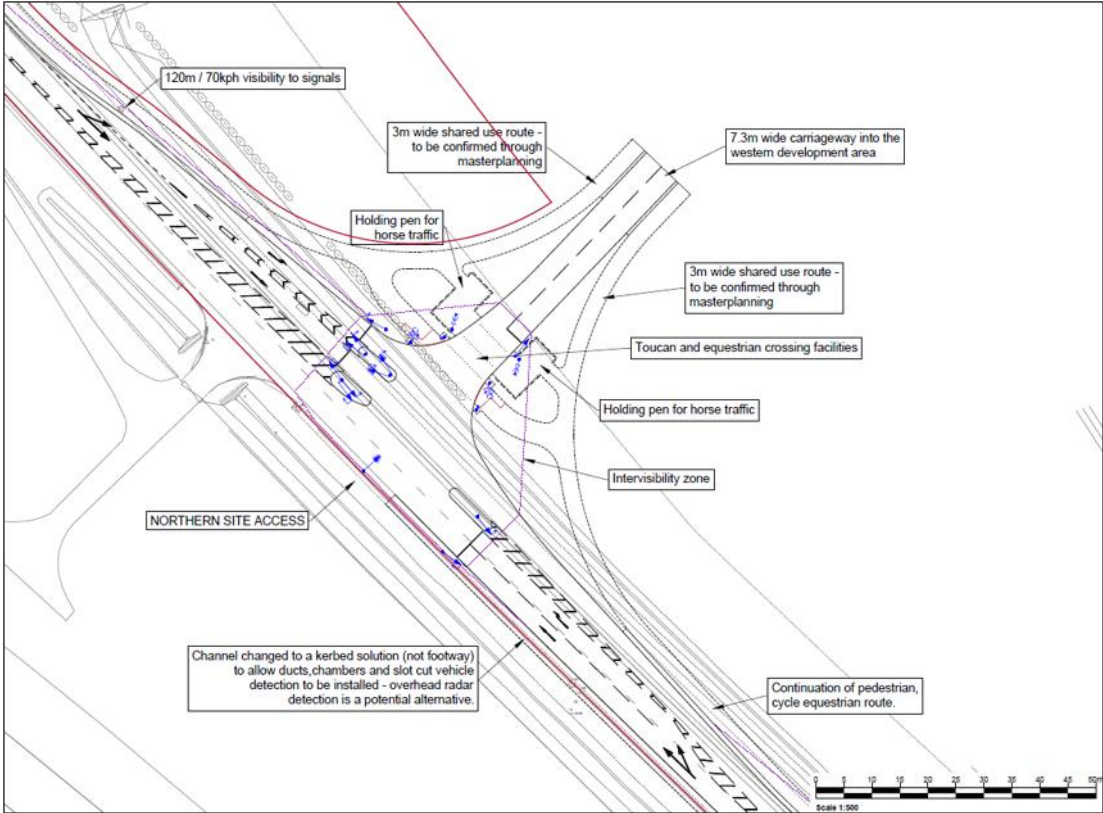


Figure 4 – A1307 Northern Site access

2.3.7 Both Site accesses include the following key features:

- Continuation of the existing shared-use surface across the Site access, separating out pedestrians and cyclists from equestrian users at the Site accesses. The share-user route into the Site will have a 3m width at both accesses, with full details to be confirmed at the reserved matters stage
- The southern access will have a 9m wide carriageway leading into the eastern part of the development. The northern access will provide a 7.3m wide carriageway, which will also be the standard width for all secondary roads throughout the Site.
- A segregated Pegasus crossing for equestrians and toucan crossing for pedestrians and cyclists will be provided across each Site access
- A bus stop will be located at the southern access, both adjacent to and opposite the junction with the A1307. This will serve the development via bus route 8 which currently travels along the A1307, but does not currently stop at this location. A staggered toucan crossing will be incorporated to enable pedestrians to safely reach the bus stop on the opposite side of the A1307.
- The northern access is also supported by an existing staggered toucan crossing located just northwest of the access. This will provide access to the other side of the A1307 and links to Bar Hill via the existing A14 NMU bridge.
- Separate left turn filter and right turn lanes into the Site will be provided at both accesses.
- Separate left and right turn lanes out from the Site at the southern access will be provided.
- Sufficient visibility of 120m for the existing 40 mph speed limit west of the Bridleway has been allowed for.

### 3 ACCESSIBILITY AND CONNECTIVITY

#### 3.1 Active Travel Accessibility

3.1.1 The location of the Site and the level of active travel infrastructure already in place is excellent and will enable movements to and from the Site through walking and cycling. The investment associated with the A14 improvements and Northstowe development has brought forward extensive and high quality infrastructure that can directly serve the Site and provide links to nearby places such as Northstowe, Oakington, Bar Hill and Cambridge.

3.1.2 Along the A1307 on the southern boundary of the Site, active travel is facilitated by a shared-user surface (for pedestrians, cyclists and equestrians) and is supported by a signalised Pegasus crossing at the western corner of the Site.

3.1.3 An active travel route crosses the A14 SRN via a segregated Active Travel Bridge south of Junction 25, linking the Site to Bar Hill and all the amenities on offer within this settlement.

3.1.4 **Figure 5** highlights the local active travel network surrounding the Site.

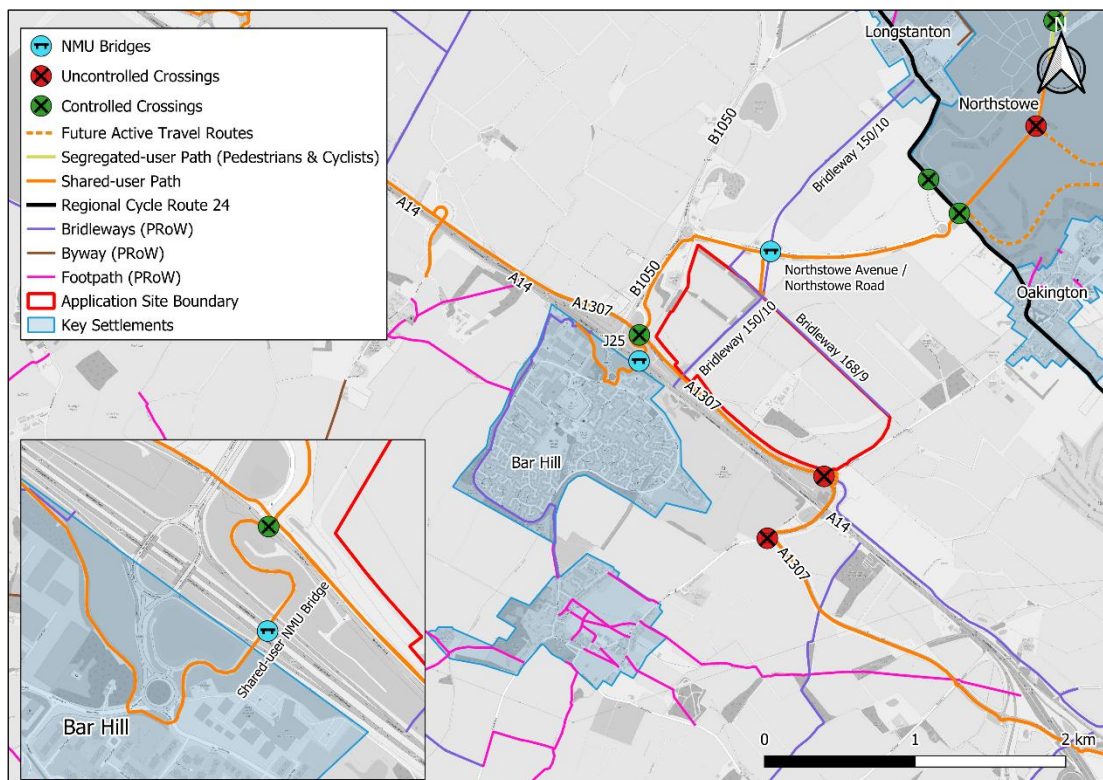


Figure 5 – Local active travel network

3.1.5 The wider active travel network surrounding the Site is presented in **Figure 6**.

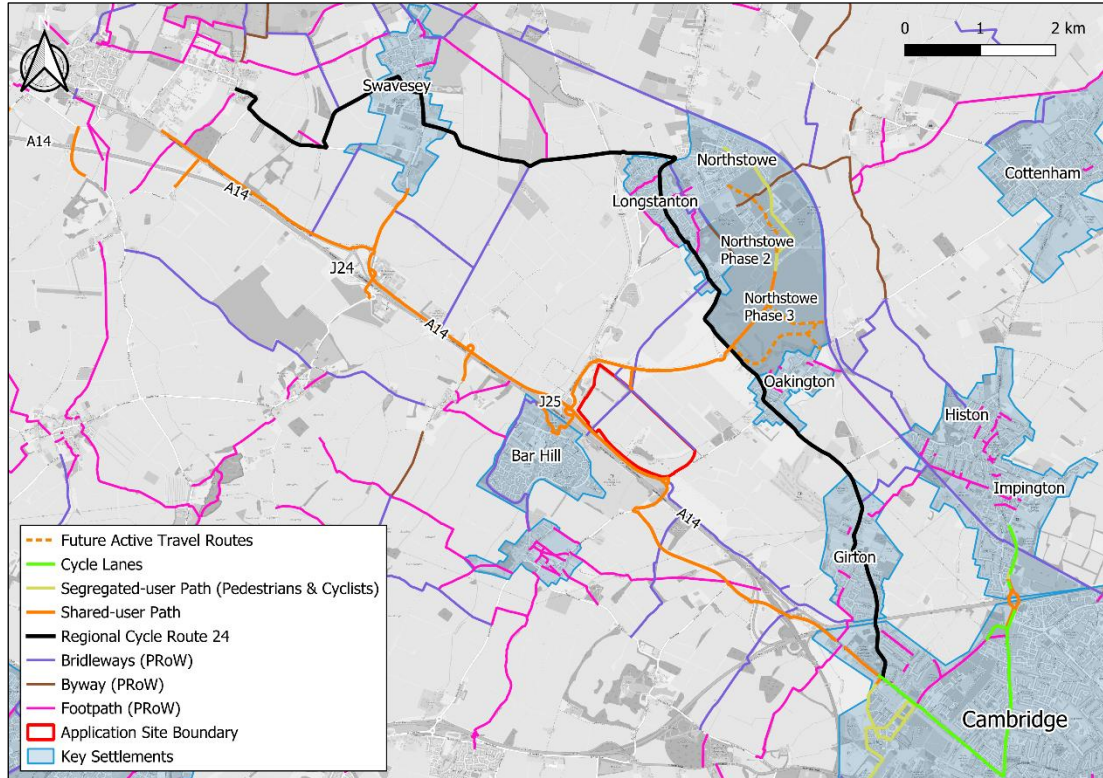


Figure 6 – Wider active travel network

3.1.6 **Figure 7** provides 10, 20 and 30-minute walking isochrones from the Site.

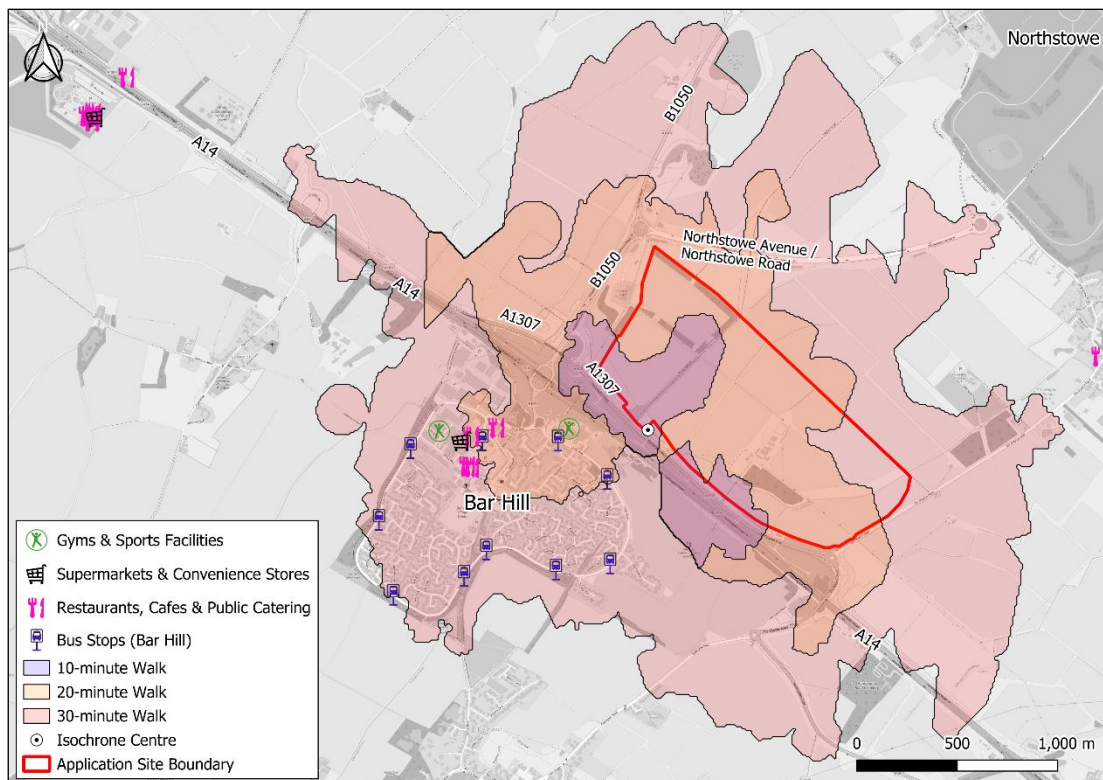


Figure 7 - 10, 20 and 30-minute walking isochrone from the Site

- 3.1.7 Bar Hill settlement is accessible within a 20-minute walk of the Site where a variety of amenities and services are accessible including Tesco Extra, restaurants, cafes, and a gym. Bus stops are also accessible within this range, including the Bar Hill stop served by Service No. 5 which offers services to Longstanton and Cambridge City Centre at a 30-minute frequency.
- 3.1.8 Connectivity for Non-Motorised Users (NMUs) is provided between Bar Hill and the proposed development. A shared-use NMU bridge provides a crossing over the A14, linking directly to existing established shared-user routes along the A1307 on the northern side of the A14 and along Saxon Way on the southern side (linking to key amenities), plus a footway along Crafts Road linking into the wider residential settlement (Bar Hill). A Toucan crossing is located at A1307 / B1050 junction, facilitating formal controlled connections for pedestrian and cyclists between the shared-user bridge and the shared user-path that borders the Site. this Toucan sits alongside a designated Pegasus crossing, facilitating connections also for horse riders.
- 3.1.9 **Figure 8** shows the 15-minute cycle isochrone from the Site which equates to a circa 5 km cycling distance.

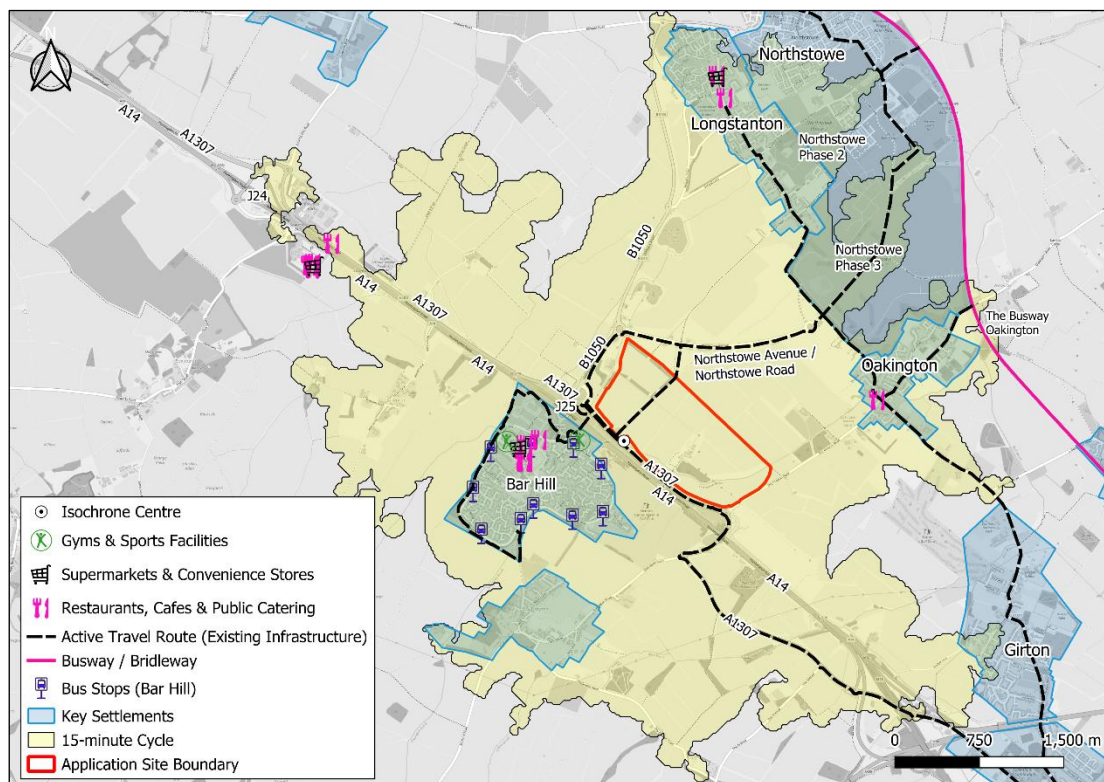


Figure 8 – 15-minute cycling isochrone from the Site

- 3.1.10 Bar Hill, Northstowe, Girton, Eddington, Longstanton, and Oakington are accessible within a 15-minute cycle of the Site. Cambridge City Centre is also accessible within a 30-minute cycle. Of these, Bar Hill, Northstowe, Girton and Longstanton are all accessible with existing active travel infrastructure surrounding the Site.

- 3.1.11 Active Travel infrastructure is already provided through the Site linking the southern and northern Site boundary and then providing a segregated Bridleway route for pedestrians and cyclists to the north and then connecting onto a new segregated route adjacent to Northstowe Road linking into Northstowe.
- 3.1.12 An alternative route is also provided via a new NMU bridge over the new Northstowe Road linking north into Longstanton and Northstowe , although this route becomes a soft track north of the bridge. The Active Travel routes and infrastructure linking the Site to the north are all new (provided as part of the Northstowe Development) and therefore LTN 1/20 compliant. These routes allow access into Northstowe and Longstanton within a 15 minute cycle along high quality segregated infrastructure.
- 3.1.13 To the south cyclists can also use the infrastructure outlined above for pedestrians (A14 NMU Bridge and A1307 Toucan Crossing) to gain access to Bar Hill and surrounding amenities within a six minute cycle from the Site access.
- 3.1.14 Cambridge North Railway Station is also accessible within a 35 minute cycle along the Busway.

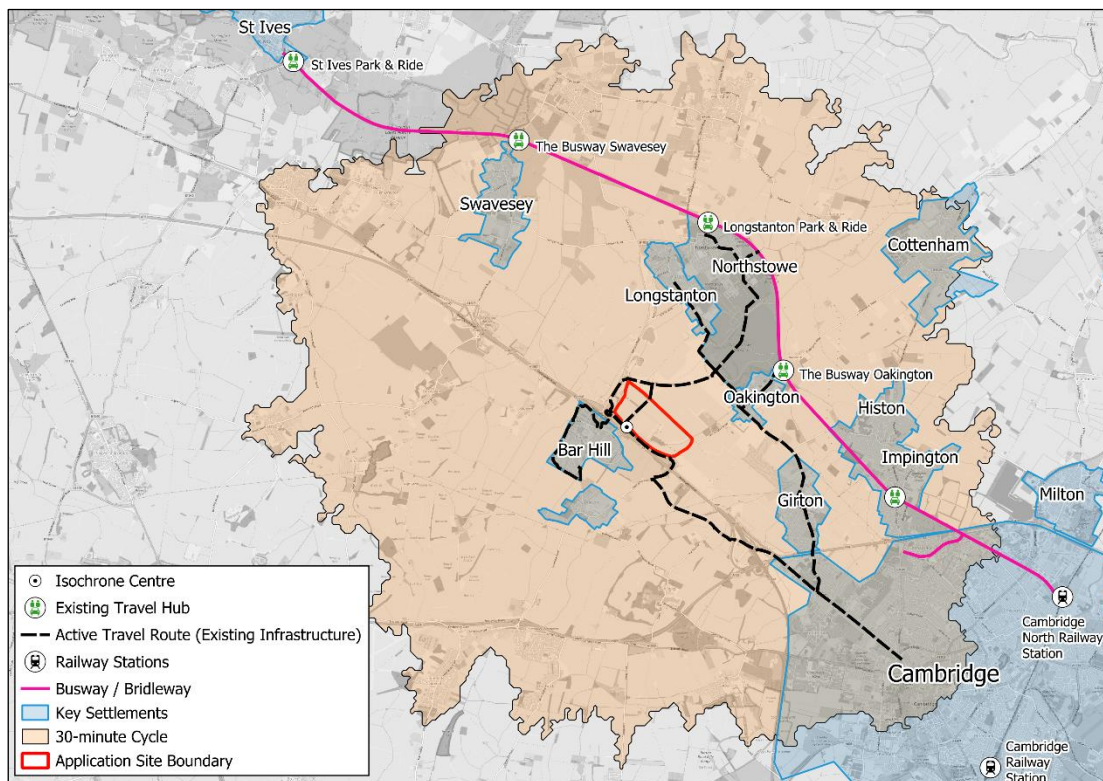


Figure 9 – 30-minute cycling isochrone from the Site

- 3.1.15 Northwest Cambridge is accessible within a 30-minute cycle of the Site. This is supported by the bridleway, shared-user paths (pedestrians and cyclists) and cycle lanes that run parallel with A1307, as presented in Figure 6.

3.1.16 The network of Bridleways towards the north of the Site enable cyclists to access wider cycling infrastructure such as the shared-user path than runs parallel with the busway. Here, a number of key transport hubs are accessible, providing direct links to Cambridge North Railway Station.

### 3.2 Public Transport Travel Times

3.2.1 **Figure 10** shows the existing travel times from the Site to the surrounding areas using all forms of existing local public transport, including the busway and buses from 'Bar Hill Tesco'.

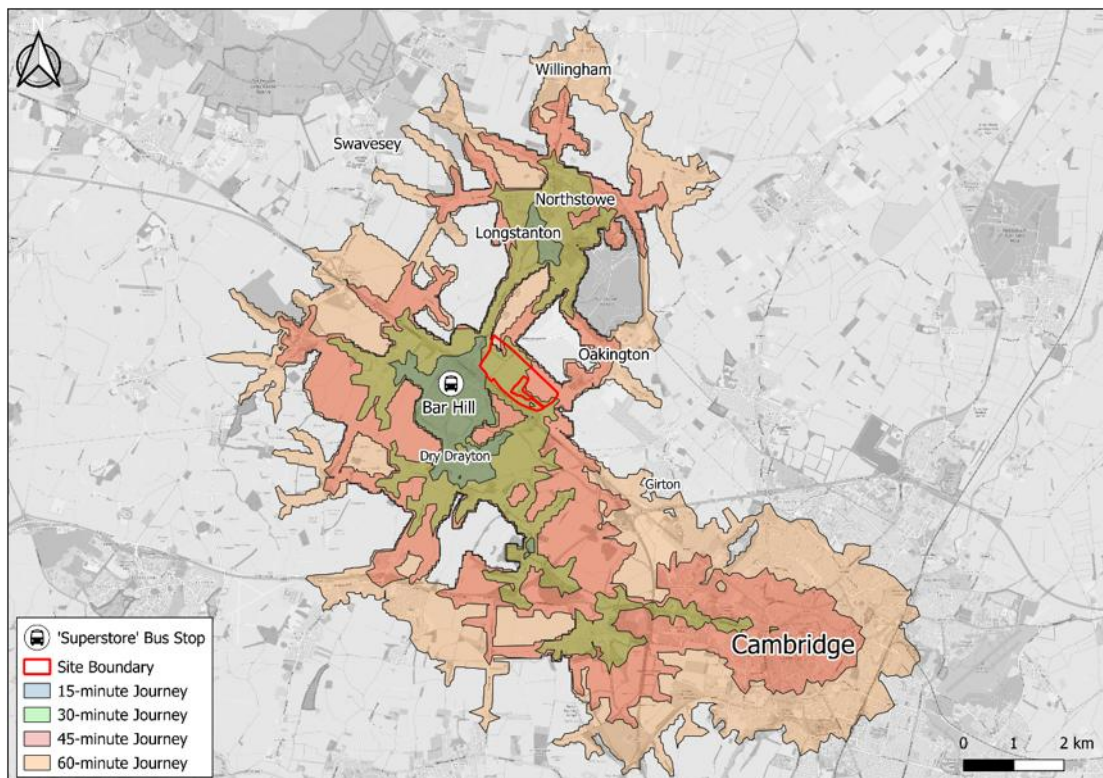


Figure 10 – Isochrone showing travel times using local public transport

3.2.2 The availability of existing public transport services enables access to several nearby settlements within an hour travel of the Site. Northstowe is largely reachable by public transport. To the south, parts of northern and central Cambridge are accessible within one-hour on public transport. North of Cambridge, the villages of Girton, Eddington, Oakington, and Willingham are accessible within 45 to 60-minutes travel of the Site.

3.2.3 These travel times are facilitated by the surrounding public transport infrastructure. The Guided Busway, which connects 'Cambridge North' Railway Station and St Ives, is served by multiple bus stops, including Longstanton Park & Ride. This is accessible via Bus Route 5, which operates close to the Site and is accessible from the Bar Hill bus stops.

3.2.4 **Figure 11** shows the surrounding public transport infrastructure and the associated bus routes in relation to the Site.

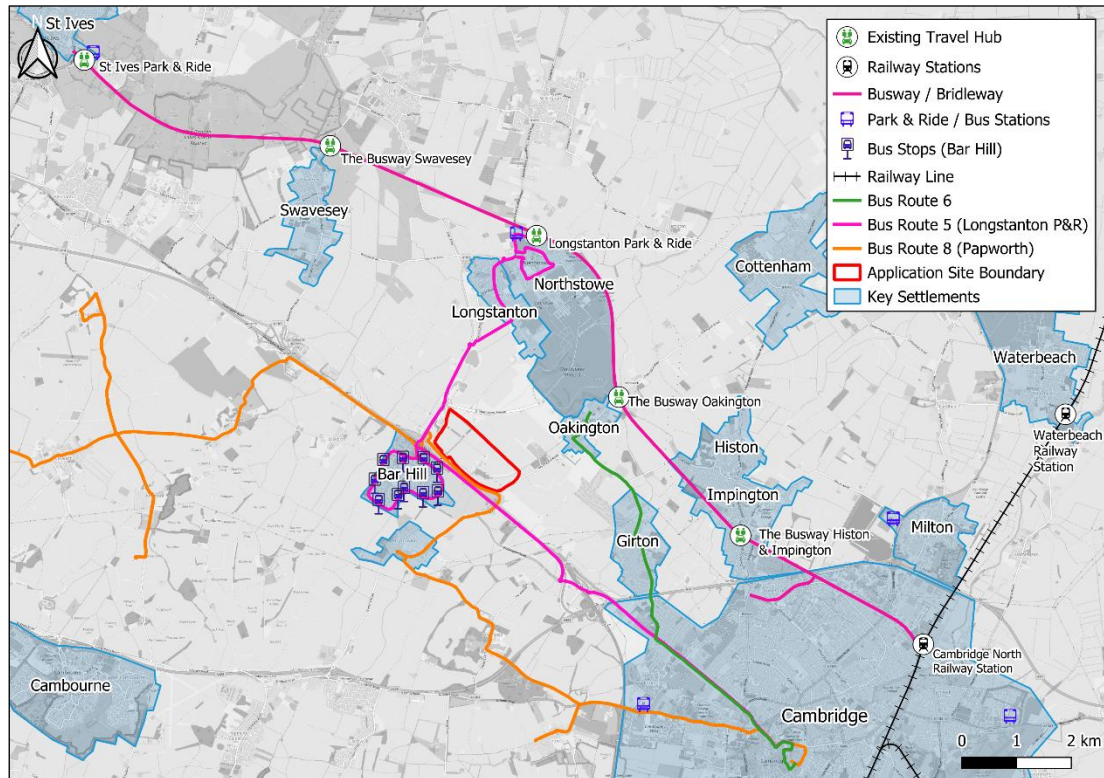


Figure 11 – Local Public Transport Infrastructure and Bus Routes

3.2.5 Bus service 8 can be accessed from the Site via the A14 NMU bridge link to the Bar Hill stops. Whilst no bus stops are provided along the A1307 currently, service 8 routes along the A1307 and passes immediately adjacent to the Site boundary.

### 3.3 Local Highway Network

3.3.1 The Site is located in close proximity to a number of primary and strategic roads, providing access to a number of towns and cities across the region.

3.3.2 **Figure 12** shows that the Site is located immediately adjacent to the strategic A14 (via the A1307), which provides links for HGV distribution towards Huntingdon and the Midlands to the northwest, Felixstowe to the east, and London (via the M11) to the south.

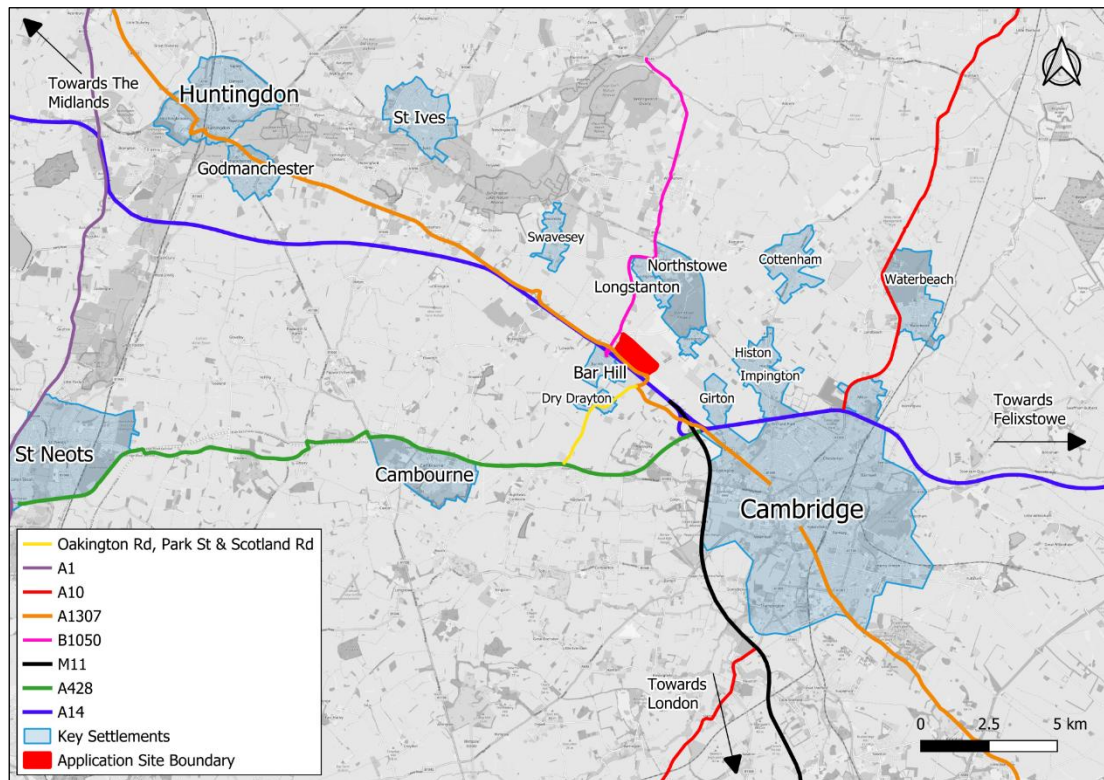


Figure 12 – Local primary and strategic road network

#### A1307

3.3.3 The A1307 runs along the southern border of the Site and connects to the Site’s existing access. It operates under a national speed limit and runs parallel with the A14. To the south, the A1307 leads directly into the centre of Cambridge, while to the north it passes through the villages of Fen Drayton and Fenstanton, continuing on to the towns of Godmanchester and Huntingdon before connecting with the A1(M). Street lighting is present at all major junctions along the A1307, and a bridleway runs adjacent to the carriageway within the vicinity of and on the same side of the carriageway as the Site.

## A14

- 3.3.4 The A14, which forms part of the SRN, runs nearby the Site, with junction 25 within close proximity and easily accessible from the Site. It runs across northern Cambridge and serves towns towards the east such as Newmarket, Bury St Edmunds, Stowmarket and Ipswich. It also connects with the M11 2.7 km south of junction 25. To the northwest, the A14 links to the towns of Huntingdon and Kettering before joining the wider strategic network via the M1 and M6.

## B1050

- 3.3.5 The B1050 runs along the eastern border of the Site, close to junctions with the A1307 and the A14. Within the vicinity of the Site, the road is subject to the national speed limit. It provides access to the nearby settlements of Longstanton and Willingham, as well as the ongoing development at Northstowe.

## 4 SUSTAINABLE TRAVEL STRATEGY

### 4.1 Overview

4.1.1 The location of the Site and the infrastructure already in place provides an immediate opportunity to ensure sustainable trips are in place. As part of the allocation Site's development, a range of sustainable travel measures will be provided that can enhance connectivity and help achieve Trip Budget aspirations.

### 4.2 Travel Plan Strategy

4.2.1 A Framework (Site-wide) Travel Plan is required to accompany the planning application. The Travel Plan should set out the guiding principles, mode share targets and measures to be implemented to encourage sustainable travel and help to manage traffic at the Site.

4.2.2 The primary objective of the Travel Plan is to set out a long term strategy to facilitate and encourage modes of travel to the Site by means other than the private car, which reflects the current central and local government policy.

4.2.3 The Travel Plan should outline the objectives, how to achieve these and timeframes in which to do so. In particular, a Target should be set to reduce private car driver trips against the current travel patterns for people working in the local area.

### 4.3 Active and Sustainable Travel Strategy

4.3.1 The Site is within close proximity to a number of settlements which are accessible via walking and cycling. These include, Bar Hill which is within a 1.2km walking distance (15-minutes) from the Site. The villages of Northstowe, Longstanton and Oakington are also accessible using active travel, as well as parts of North Cambridge. The direct active travel routes to these settlements based on existing active travel infrastructure are presented in **Figure 13**.

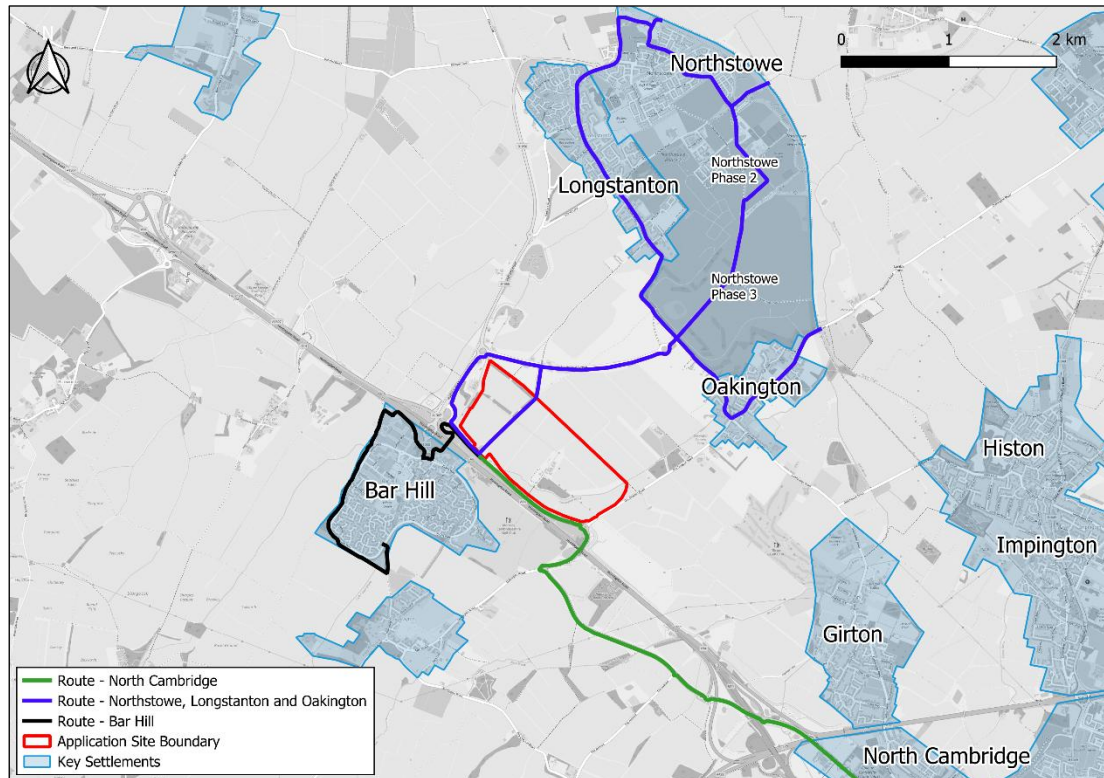


Figure 13 – Existing Active Travel routes to the Site

4.3.2 The existing active travel infrastructure surrounding the Site means that there are number of walking and cycling routes to Cambridge and other surrounding settlements. As referenced in the Draft Greater Cambridge Local Plan (September 2025), there are some challenges associated with the existing active travel infrastructure and public transport surrounding the Site.

4.3.3 There is an opportunity to improve and encourage active travel across the Site. These relate to:

- Maximising cycle parking across the entire Site including provision for oversized bikes, all located close to building entrances;
- End of journey staff facilities across all proposed buildings including washing, shower, storage, and changing facilities;
- One main Mobility Hub (including waiting, timetable and seating facilities) with a supporting amenity hub, equipped with space for Voi hire, secure cycle parking, cycle hire lockers, and E-Bike charging points;
- Active travel route improvements providing the most direct route for walking and cycling through the Site linking to external links, including an internal cycle route along the length of the access road linking A1307 cycle route to each proposed building.
- Link between access road and bridleway providing alternative route to Northstowe.

4.3.4 The main internal spine road will have shared-user paths. These will integrate with the shared-use surface running parallel with the A1307 and Bridleway 151/10, facilitating the active travel routes.

- 4.3.5 Pedestrians and cyclists will also be given priority at all internal junctions within the Site in the form of junction treatments such as Copenhagen style crossings.

### Active Travel Route Improvements

- 4.3.6 The internal shared-user path along the length of the access road will connect with each unit and link in with the existing shared-user path on the A1307. The routes will provide access to a new nature park for Bar Hill and Northstowe residents.
- 4.3.7 To make local active travel and shared-user paths safer, street lighting for the internal shared user-paths will be implemented throughout the Site. Street lighting can also be implemented to improve existing active travel routes.
- 4.3.8 The routes through the nature park will provide a link through to the PRoW that runs along the eastern boundary of the Site. Accommodating a shared-use path on Dry Drayton Road is unlikely to be deliverable based on the limited verge width and impact on existing hedgerows. However, CCC own land that can connect the existing PRoW to future infrastructure associated with the Northstowe development. This would provide an alternative route towards the Site from Oakington. The Site will incorporate appropriate facilities up to boundary of the Site to allow for any future connection.

### Cycle Parking

- 4.3.9 Each plot within the Site will include measures to encourage walking and cycling. These will include:
- Quality cycle parking provided adjacent to each unit, that are covered, secure, lit and in well-located areas close to main building entrances and cycle access points.
  - All occupiers will be required to provide shower, changing and locker facilities to support more active journeys – such as those wishing to cycle, walk or run to work.
  - Further commitments from the occupiers to ensure that these facilities are suitably equipped – such as including hair dryers – and maintained regularly to ensure they remain attractive.
  - Visitor cycle parking will also be provided and conveniently located near the entrance to each unit.
  - The number of cycle parking spaces will be confirmed at Reserved Matters, but will meet or exceed Local Plan policy.

### End of Journey Facilities

- 4.3.10 End of journey facilities will be made available to employees on Site. This will include showers, changing rooms, storage and lockers which will be provided in each building and maintained regularly.

### Mobility hub

- 4.3.11 As part of the Site wide transport strategy, a mobility hub will be provided. It will be located in the centre of the Site, making it conveniently and accessible from most buildings on the Site. It will be located on the southern side of the spine road.
- 4.3.12 From an active travel perspective, the Mobility Hub will provide a number of facilities, including:
- Internal Bus Stop plus waiting, timetable and seating facilities.
  - Site management and information desk to provide assistance with any transport queries;
  - Covered cycle parking in the form of Sheffield Stands;
  - Fast E-bike charging points;
  - Cycle hire lockers;
  - Cycle repair hub; and
  - Space for micromobility parking (Voi bikes and e-scooters)

### Car Club

- 4.3.13 A car club is where several people access and drive the same vehicle. For example, several people in the same community would drive the car on different days of the week. This means that drivers have access to cars without the need to own them. Access without ownership is becoming more common in modern-day living.
- 4.3.14 There is potential to introduce a car club at the Site. The provision of car clubs will encourage employees to adopt more sustainable travel habits with the knowledge that should an emergency arise, the need to travel home quickly, or the need to run an errand, collect a parcel, or vary their journey in another way, there is a flexible option which can be used as required on-demand.
- 4.3.15 A car club will be provided with the provision of a single vehicle initially. Additional vehicles could be provided when commercially viable subject to utilisation levels and discussions between the Travel Plan Co-Ordinator Car Club operator.

### Car share

- 4.3.16 Car sharing is where a car driver will use their own personal vehicle to give lifts to other passengers, usually whose origins and destinations are similar to their own.
- 4.3.17 The potential for car sharing at the development is significant, with employees having broadly similar working times with regular start and end times to each shift, and employees likely to be drawn from similar catchments. The internal layout of the Site would be designed with car share priority spaces provided within the car park in prominent and convenient locations.
- 4.3.18 The provision of Car Share parking spaces will be identified at the outset prior to occupation of any particular Site building, as well as of the wider Site. These details will be defined with CPMPs.

## 4.4 Bus Strategy

### Shuttle Bus

- 4.4.1 To improve public transport travel times to key settlements near the Site, a shuttlebus service is proposed for those travelling from Huntingdon and Cambourne, to the northwest and southwest of the Site, respectively. The shuttle bus will pick up/drop off employees outside the mobility hub using the laybys on either side of the spine road.
- 4.4.2 **Figure 14** presents the Huntingdon and Cambourne shuttlebus catchment with isochrones showing the approximate travel times.



Figure 14 – Cambourne and Huntingdon Shuttle catchment and journey times

- 4.4.3 Cambourne and much of central Huntingdon is accessible within 30-minutes of the Site via a shuttlebus. Within a 60-minute travel time, the entirety of Huntingdon is accessible.
- 4.4.4 Although Cambourne and Huntingdon are initially identified as key settlements where future employees would benefit from a shuttle bus service, it is envisaged that other locations and nearby settlements may also benefit from private bus provision. Therefore, the shuttle bus is proposed to be a flexible service that will adapt its route to accommodate multiple employee addresses and shift patterns.
- 4.4.5 To enable this flexibility, it is envisaged that a third-party private bus provider would engage with occupiers to understand this information. Using technology, they would be able to determine the most efficient routes and pick up/drop off points and determine the locations with the highest demand. This would be supported by an app-based or online booking platform to allow employees to seamlessly book and pay for the service when required. In the longer term, it is anticipated that the service will become self-sufficient.

- 4.4.6 The shuttle bus services would be monitored as part of the Travel Plan monitoring process, and it is anticipated that the flexibility will help to promote the uptake of sustainable travel and reduce the number travelling to the Site via single occupancy vehicle.
- 4.4.7 As an example **Figure 15** presents the potential catchment of a shuttle service operating to/from Cambourne, Huntingdon, Longstanton P&R and Cambridge North.

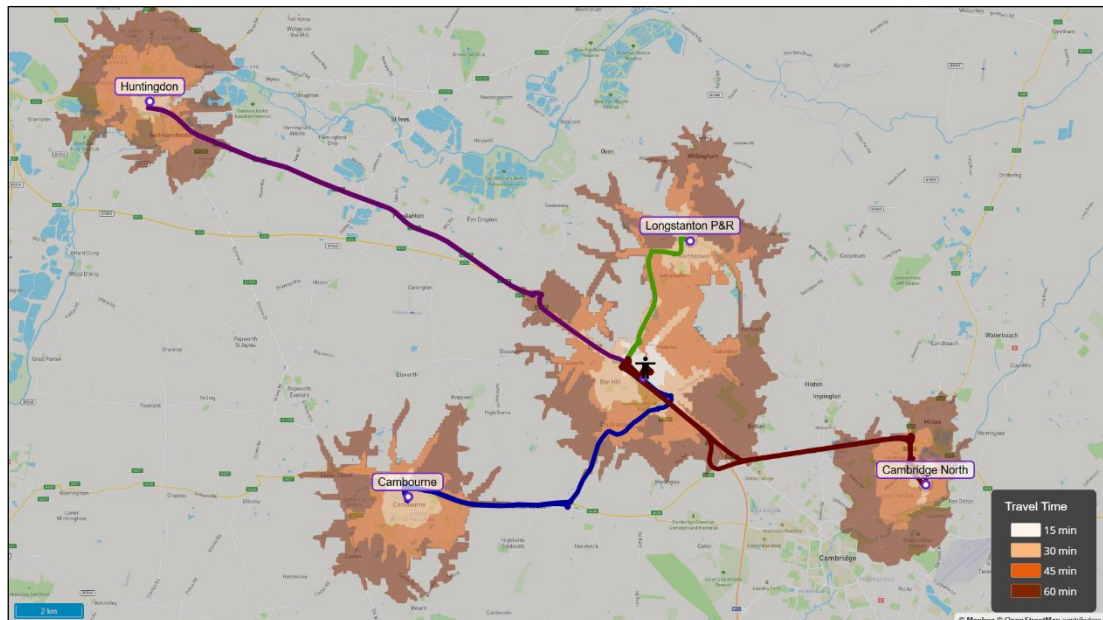


Figure 15 – Cambourne, Huntingdon, Longstanton P&R and Cambridge North Shuttle catchment and journey times

### Proposed Bus Stops to Serve Development

- 4.4.8 Bus service 8 currently runs along the A1307, adjacent to the Site's southwestern boundary and offers an opportunity to introduce public transport facilities in closer proximity to the Site.
- 4.4.9 As part of the public transport strategy, two new bus stops are proposed to the southwest of the Site on both sides of the A1307 at the southern Site access. The introduction of these stops along the A1307 would not require any rerouting or diversion of bus service 8 and will therefore have minimal impact on existing journey times. Further stops will be provided within the Site as part of the Mobility Hubs to allow some service 8 buses to divert a short distance into the Site during peak employment arrival and departure times, should local bus companies deem this viable for their routing strategy as patronage increases, allowing for future proofing. These internal stops will also be served by the proposed shuttlebus outlined above.
- 4.4.10 Bus service 8 currently runs at a weekday frequency of 3 to 4 services in each direction. The proposed bus stops are due to be located adjacent to the southern access.
- 4.4.11 To assess how the proposed bus stops and shuttlebus service will positively affect public transport travel times from the Site, travel time analysis was conducted. The resulting travel time isochrones from the Site are illustrated in **Figure 16**. The isochrone reflects travel times for a

single point in time and incorporates live public transport timetables. As a result, it represents an indicative snapshot of travel times, which may vary over the course of a typical working day.

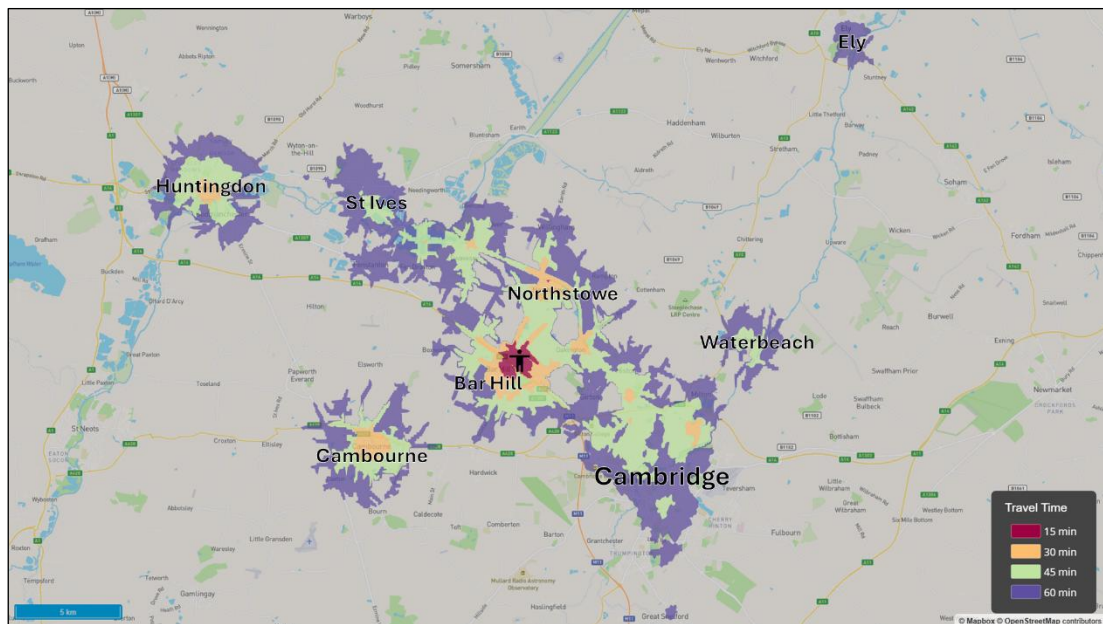


Figure 16 – Proposed travel times for all public transport and the proposed shuttle bus services

- 4.4.12 The addition of the proposed bus stops along the A1307 to be served by the existing No. 8, internal bus stops, and the proposed shuttle service to / from Cambourne, Huntingdon, Longstanton P&R and Cambridge North are forecast to improve travel times significantly.

### HGV measures

- 4.4.13 The Site will provide ample space for HGVs to park both during operational requirements and as part of layover requirements. Within units, amenity facilities for drivers will be provided ensuring that the demand generated for these facilities is accommodated.
- 4.4.14 The development at Slate Hall Farm will also implement robust measures to discourage Site generated HGVs from travelling through local villages, particularly Dry Drayton where the route connects the A1307 with the A428. HGVs should always use and provide routes that are the most appropriate strategic and primary roads for example motorways and trunk roads, they should avoid (local) A and B roads unless absolutely necessary for access purposes and where possible avoid environmentally sensitive areas.
- 4.4.15 An HGV weight restriction is enforced by the police. Communities may wish to create a lorry watch type scheme where communities can report incidents of HGVs that are using unsuitable roads to the Parish Council for them to pass the collated information to the police.
- 4.4.16 In addition, active measures such as Automatic Number Plate Recognition cameras can identify movements specifically associated with the Site. These will be monitored and appropriate action taken.

## 5 TRIP BUDGET, VEHICLE TRIP ATTRACTION & DISTRIBUTION

### 5.1 Role of Trip Budget

5.1.1 The CCC definition of a Trip Budget is as follows:

*'A vehicular trip budget limits the number of weekday morning and evening vehicle trips allowed to and from each strategic allocation Site to manage the impact on the road network.'*

5.1.2 The role of the Trip Budget in plan making is therefore to create confidence that strategic Sites can be allocated with effects which are consistent with the Plan's strategy and with planned infrastructure investment which can avoid a severe transport impact.

5.1.3 At the plan making stage, the Trip Budget approach fulfils the national policy as it:

- Provides proportionate evidence that a quantum of development can be delivered;
- Demonstrates deliverability through obtaining commitment to the principle from the Site promotor / developer;
- Retains some flexibility in its application in the short term so it can respond to unforeseen changes and major sustainable infrastructure delivery as the plan period progresses;
- Enables an early definition of how the approach will inform future detailed planning phases where the specific Trip Budget can be better and more fully defined; and
- Provides the basis of a framework for monitoring and local authority control (Monitor and Manage) with its application covering planning to delivery.

5.1.4 During the planning application process, further operational network assessments would be undertaken as part of the Transport Assessment to further refine the Trip Budget. These will take full account of phasing, detailed access designs, network mitigations and wider changes, as well as detailed and agreed methodologies for wider growth/ reductions and other committed schemes.

5.1.5 The Transport Assessment will report the trip generation / attraction, distribution, mode share and assignment in detail of the completed development using a methodology scoped and agreed with approving authorities.

5.1.6 The outcome of the modelling at this stage will be to establish the level of acceptable trip making from the Site on the surrounding network on a corridor and junction basis which will form then the basis of obligations and ongoing post-planning monitoring.

5.1.7 It is at the planning application stage that detailed conclusions can be reached about the precise Trip Budget and how it is to be applied and monitored.

## 5.2 Defining a Trip Budget

- 5.2.1 As is consistent with strategic Sites in the Greater Cambridge area, it is anticipated that a suitable vehicle Trip Budget will be agreed for the Site to reflect the GCLP Development Strategy and the Site’s allocation and be used as a tool to drive better transport outcomes through its application and monitoring. The Policy for the Site outlines that Trip Budgets are expected to be defined.
- 5.2.2 The trip budget will be refined as the project progresses through the planning and development process. This Transport Note defines an initial Trip Budget based on a level of trips which can be accommodated by the local highway network, factoring in any mitigations required.

## 5.3 Forecast vehicle trip attraction

- 5.3.1 To calculate the forecast trip generation for the Site, the TRICS database has been interrogated to provide a trip rate for all travel modes and for similar B2 and B8 land uses located in suburban and edge of town areas. A summary of the selected TRICS parameters are presented in **Table 1**.

Table 1 – TRICS Parameters

TRICS Parameter	B8	B2
<b>Category / Land Use</b>	02/F, Employment/Warehousing (Commercial)	02/D, Employment/Industrial Estate
<b>Day of Week</b>	Monday-Friday	Monday-Friday
<b>Selected Range</b>	10,000 – 105,000 sqm GFA	10,000 – 200,000 sqm GFA
<b>Location Type</b>	Suburban Area & Edge of Town	Suburban Area & Edge of Town
<b>Date Range</b>	01/01/2016 – 11/04/2024	01/01/2016 – 10/08/2024

- 5.3.2 The resulting trip rates for both B2 and B8 land uses are presented in **Table 2**.

Table 2 – B8 and B2 trip rates

Unit	AM (0800 – 0900)			PM (1700-1800)			Daily (0700-1900)		
	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way	Arr.	Dep.	Two-way
<b>B2 – All Vehicle</b>	0.283	0.114	0.397	0.093	0.242	0.335	2.273	2.204	4.477
<b>B2 - HGVs</b>	0.018	0.016	0.034	0.01	0.008	0.018	0.21	0.21	0.42
<b>B8 – All Vehicles</b>	0.132	0.052	0.184	0.063	0.116	0.179	1.215	1.277	2.492
<b>B8 - HGVs</b>	0.025	0.031	0.056	0.03	0.019	0.049	0.368	0.373	0.741

- 5.3.3 From these trip rates, the trip generation was then determined based on the following reasonable scenario assumptions presented in **Table 3**.

Table 3 – Scenario assumptions

Land use	Floor area (sqm)
<b>B2</b>	24,000 (10%)
<b>B8</b>	216,000 (90%)
<b>Total</b>	<b>240,000</b>

5.3.4 The highway capacity assessment for this note has considered the full allocation of 240,000 sqm. The trip attraction outputs for the full allocation of 240,000 sqm is presented in **Table 4**.

Table 4 – Trip Attraction for 240,000 sqm of floor space

240,000 sqm	AM			PM		
	In	Out	Total	In	Out	Total
<b>All vehicles</b>	353	140	493	204	278	482
<b>HGVs</b>	58	71	129	69	45	114

## 5.4 Trip distribution

### Staff Trip Distribution

5.4.1 To establish the likely trip distribution to and from the Site for staff, reference has been made to the 2011 Census<sup>1</sup> dataset 'Location of usual residence and place of work by method of travel to work (MSOA level)' for the South Cambridgeshire 005 output area.

5.4.2 The resultant staff trip distribution is shown in **Table 5**.

Table 5 - Staff Trip Distribution

Network Exit	Distribution
<b>B1050 North East</b>	16%
<b>Dry Drayton Road</b>	10%
<b>A14 South East</b>	22%
<b>A1307 South East</b>	5%
<b>Oakington Road West</b>	11%
<b>A14 North</b>	32%
<b>A1307 Huntingdon Road</b>	2%
<b>Bucking Way Road</b>	1%
<b>Total</b>	100%

<sup>1</sup> 2011 Census used in preference to 2021 Census which was affected by the Covid 19 Pandemic.

5.4.3 Two routes could be used to/from the Site via the A14 west comprising:

- A14 > A1307 (via J24); or
- A14 > B1050 > A1307 (via J25)

5.4.4 To allow for a reasonable robust assessment of the impact at J25 and accounting for the most direct journey, all trips to/from A14 west have been assigned via J25. Only local trips have been assigned via J24 of the A14.

#### **HGV Trip Distribution**

5.4.5 It is assumed that all HGV arrivals and departures to the Site will route to and from the A14. The HGV split is assumed to be 50/50 east and west on the A14 as it is not yet known the destinations that would be served on the basis that the final occupier is currently unknown.

5.4.6 This is considered to be a reasonable assumption based on access to the M11 and London to the south and A1(M) to the north/west which would both provide a balance in key origins and destinations for freight movements.

#### **Trip Assignment**

5.4.7 Vehicle trips have then been assigned to the network based on the most direct route using local knowledge and google journey time data.

## **6 IMPACT ASSESSMENT**

### **6.1 Introduction**

6.1.1 The effects of the trips being forecast at this stage of the planning process have been assessed to determine whether they can be accommodated by the surrounding highway network.

### **6.2 Walking**

6.2.1 There is already a high quality pedestrian network linking up to the Site boundaries, that provides links to Bar Hill via the NMU bridge over the A14, 4m wide shared-use service along the A1307 Site boundary providing links to Northstowe and Cambridge, Active Travel route linking through the Site to/from Northstowe and Longstanton.

6.2.2 The level of pedestrian infrastructure already provided is more than sufficient to accommodate the expected number of pedestrian trips and also encourage an uplift in pedestrian movements through the Site's Travel Plan measures and the proposed Site layout will link into to this existing high quality walking infrastructure

### **6.3 Cycling**

6.3.1 Local cycle infrastructure already provides wide and in many cases segregated routes to/from the Site from numerous settlements, including Cambridge. The existing widths provided for cyclists along these routes offers a Level of Service (LoS) that is expected to encourage an uplift in cycling mode share for the Site. New infrastructure recently provided to the north as part of the Northstowe development have been installed post LTN 1/20 making them compliant with the latest standards.

### **6.4 Public Transport**

6.4.1 As part of the development proposals, two shuttlebus services will be provided between the Site and Cambourne, and the Site and Huntingdon. Furthermore bus stops will be provided adjacent to the Site boundary on the A1307 (and also within the Site) allowing the existing No. 8 to stop and serve the Site.

6.4.2 These improvements to public transport will significantly benefit new employees and existing local residents by providing links to settlements not currently accessible by bus and also significantly reducing journey times to key settlements including; Cambridge, Histon, Impington, Northstowe, Longstanton, Swavesey, Over, Willingham, Milton, Waterbeach, St Ives, Huntingdon, Cambourne, and Cambridge North Railway Station and open up access from Cambridge South.

## 6.5 Vehicle Network Capacity

- 6.5.1 Accounting for the proposed trip generation, distribution and assignment detailed above, alongside background traffic growth and committed developments (including the Northstowe development), capacity analysis has been undertaken of existing junctions surrounding the Site.
- 6.5.2 It is important to note that for plan making, confidence of an access solution is required but specific designs can evolve throughout the planning process. The tested junctions are shown in **Figure 17**.

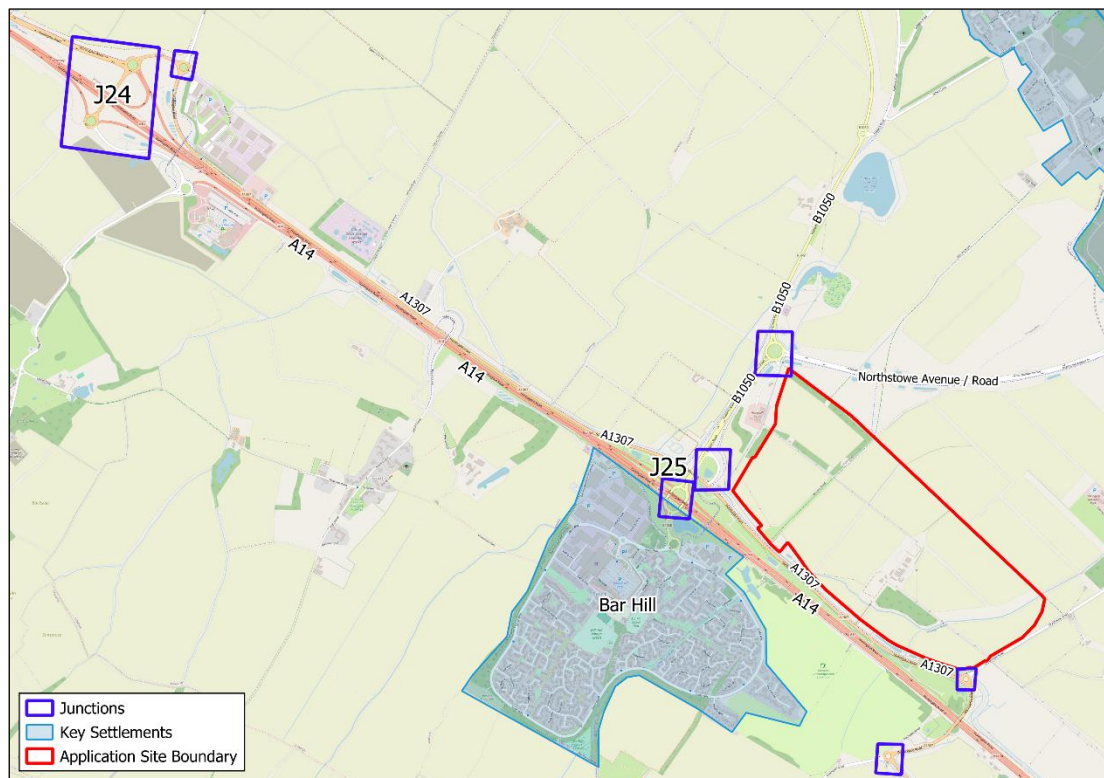


Figure 17 – Tested junctions

- 6.5.3 The tested junctions include the following:
- Junction 1 – B1050 – A1307 Jughandle Junction;
  - Junction 1A – B1050 – A1307
  - Junction 1B – A1307 – A1307
  - Junction 2 – A14 Junction 25 B1050 Roundabout;
  - Junction 3 – B1050 – Northstowe Road Roundabout;
  - Junction 4 – A1307 – Dry Drayton Roundabout;
  - Junction 5 – A1307 – Oakington Road Roundabout;
  - Junction 6 – A14 Junction 24 (Modelled Separately)
  - Junction 6A – A14 Junction 24 – A1307 – Buckingway Roundabout;

- Junction 6B – A14 Junction 24 – A1307 – Huntingdon Road Roundabout;
- Junction 6C – A14 Junction 24 – Swasey Southern Roundabout; and
- Junction 7 – Site Access junctions (both)

6.5.4 The following scenarios have been assessed;

- 2030 + Northstowe Committed Development (Local Roads) / TEMPRo (SRN)
- 2030 + Northstowe Committed Development (Local Roads) / TEMPRo (SRN)+ Proposed Development (assuming full build out)
- 2035 + Northstowe Committed Development (Local Roads) / TEMPRo (SRN)
- 2035 + Northstowe Committed Development (Local Roads) / TEMPRo (SRN) + Proposed Development (assuming full build out)
- 2045 + Northstowe Committed Development(Local Roads) / TEMPRo (SRN)
- 2045 + Northstowe Committed Development (Local Roads) / TEMPRo (SRN)+ Proposed Development (assuming full build out)

6.5.5 The following reasonable development assumptions have been used:

- 240,000 sqm total floor area
- 10% B2 land use
- 90% B8 land use

6.5.6 The modelling undertaken suggests that most junctions are forecast to operate within capacity under the assessed scenarios. This includes the Site access junctions. For some off-Site junctions, mitigation may be necessary and options have been considered in the following sections. Once an appropriate trigger through a Monitor and Manage framework has been identified, the improvements may be implemented.

6.5.7 Further design may be required and discussions with approving authorities, necessary approval processes and Road Safety Audits undertaken as part of later design and approval stages.

#### Junction 1A – B1050 – A1307 Junction (northern Jughandle Junction)

6.5.8 To improve the capacity of this junction the following upgrades may be provided, with the resulting capacity summaries provided in **Table 6**:

- Extend northern left turn lane using some of the existing central reserve and some southern verge to avoid the existing BT Chamber.
- Additional southern right turn lane to allow for two towards southern jughandle.
- Updated cycle times.

6.5.9 A layout of this proposed junction upgrade is presented in **Figure 18**.

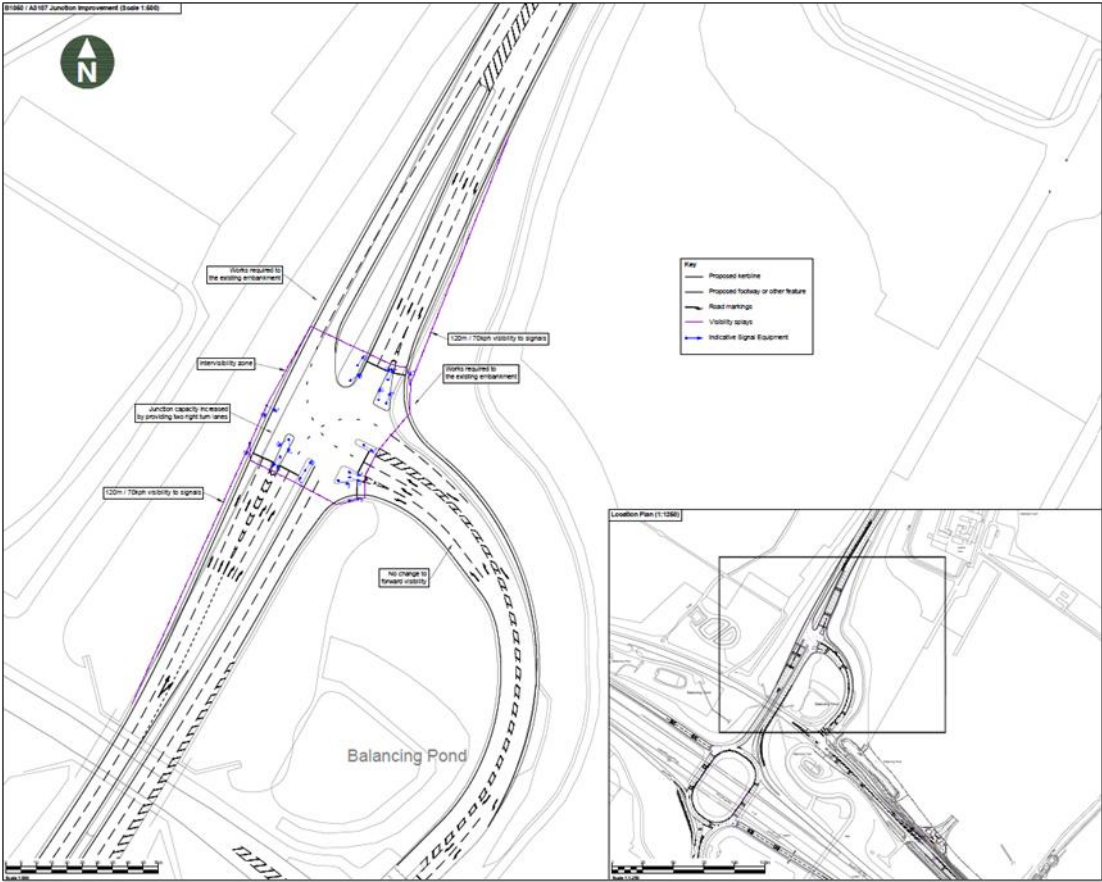


Figure 18 – B1050/A1307 junction upgrade

Table 6 - Junction 1A - B1050/A1307 Junction (northern Jughandle) – Proposed Junction Upgrade

Arm	AM		PM	
	DoS (%)	MMQ (pcu)	DoS (%)	MMQ (pcu)
<b>2035 Future + Northstowe + Proposed Development + Junction Upgrade</b>				
<b>B1050 (North) Left</b>	33	5	20	3
<b>B1050 (North) Ahead</b>	85	21	62	9
<b>A1307 (East)</b>	83	23	69	19
<b>B1050 (South) Ahead</b>	29	5	49	7
<b>B1050 (South) Right</b>	68	7	49	4
<b>Cycle Time (s)</b>	90		90	
<b>Overall Junction PRC (%)</b>	6.3		30.8	
<b>2045 Future + Northstowe + Proposed Development + Junction Upgrade</b>				
<b>B1050 (North) Left</b>	35	5	19	3
<b>B1050 (North) Ahead</b>	86	22	61	10
<b>A1307 (East)</b>	82	14	70	13
<b>B1050 (South) Ahead</b>	32	5	56	7
<b>B1050 (South) Right</b>	62	6	56	5
<b>Cycle Time (s)</b>	90		90	
<b>Overall Junction PRC (%)</b>	4.8		27.9	

6.5.10 The results presented above show that the enhancements will allow the junction to operate within capacity in the future year scenarios with the allocation Site developed.

#### Junction 1B – A1307/A1307 Junction (southern Jughandle Junction)

6.5.11 To improve the capacity of this junction the following upgrades could be provided with the resulting capacity benefits are provided in **Table 7**:

- Extend right turn lane on the eastern A1307 arm
- Updates to signals timings – MOVA adjustments/installations
- Addition of a left turn filter, as part of signal timings, from the northern B1050 arm
- Updated cycle times

6.5.12 A layout of this proposed junction upgrade is presented in **Figure 19**.

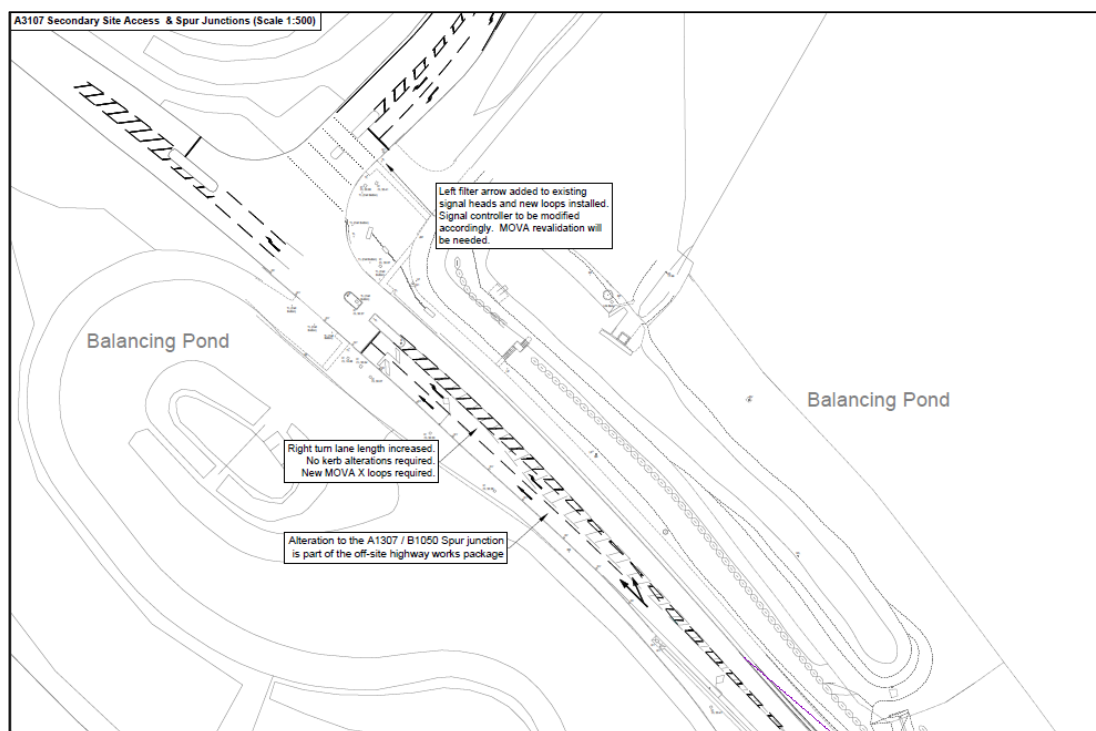


Figure 19 – A1307 /A1307 junction upgrade

Table 7 - Junction 1A - A1307/A1307 Junction (southern Jughandle) – Proposed Junction Upgrade

Arm	AM		PM	
	DoS (%)	MMQ (pcu)	DoS (%)	MMQ (pcu)
<b>2035 Future + Northstowe + Proposed Development + Junction Upgrade</b>				
<b>B1050 (North)</b>	86	23	56	12
<b>A1307 (East)</b>	61	13	74	20
<b>A1307 (West)</b>	88	19	65	5
<b>Cycle Time (s)</b>	90		90	
<b>Overall Junction PRC (%)</b>	2.0		21.4	
<b>2045 Future + Northstowe + Proposed Development + Junction Upgrade</b>				
<b>B1050 (North)</b>	88	21	60	13
<b>A1307 (East)</b>	63	13	74	21
<b>A1307 (West)</b>	86	20	66	6
<b>Cycle Time (s)</b>	90		90	
<b>Overall Junction PRC (%)</b>	1.9		21.8	

6.5.13 The results presented above show that the proposed junction upgrade will allow the junction to operate within capacity in the future year scenarios with development, and therefore offers Nil Detriment when accounting for the impact of the proposed development.

## Junction 2 – A14 Junction 25 B1050 Roundabout

6.5.14 To improve the capacity of this junction the following upgrades are proposed and the resulting capacity benefits are provided in **Table 8**:

- Signalise westbound off slip and eastbound off slip arms to improve capacity and manage queues.

6.5.15 A layout of this proposed junction upgrade is presented in **Figure 20**.

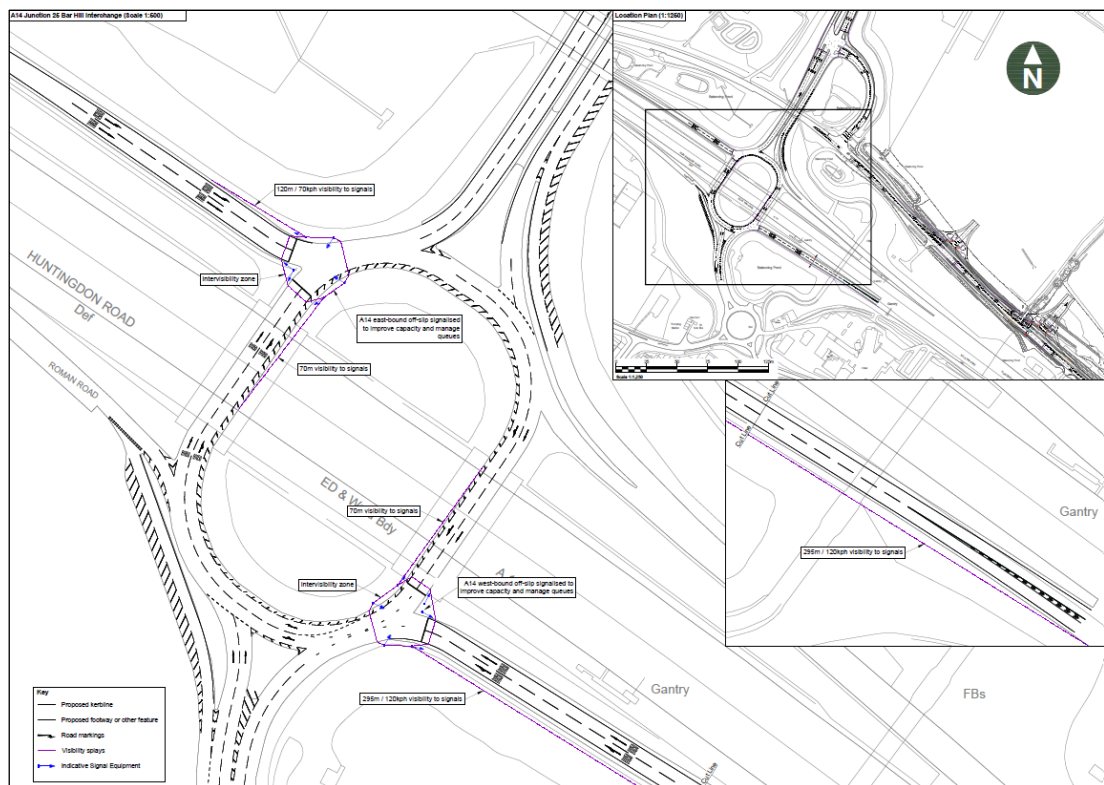


Figure 20 – A14 Junction 25 proposed upgrade

Table 8 - Junction 2 - A14 Junction 25 B1050 Roundabout – Proposed Junction Upgrade

Arm	AM		PM	
	DoS (%)	MMQ (pcu)	DoS (%)	MMQ (pcu)
<b>2035 Future + Northstowe + Proposed Development + Junction Upgrade</b>				
<b>B1050 (N)</b>	35	6	34	8
<b>A14 (E) Left</b>	66	8	78	12
<b>A14 (E) Ahead</b>	28	3	63	8
<b>B1050 (S) Left</b>	21	0	47	3
<b>B1050 (S) Ahead</b>	33	0	44	2
<b>A14 (W)</b>	60	6	79	6
<b>Cycle Time (s)</b>	60		60	
<b>Overall Junction PRC (%)</b>	36.9		13.9	
<b>2045 Future + Northstowe + Proposed Development + Junction Upgrade</b>				
<b>B1050 (N)</b>	35	6	35	9
<b>A14 (E) Left</b>	64	8	84	15
<b>A14 (E) Ahead</b>	28	3	70	10
<b>B1050 (S) Left</b>	21	0	55	4
<b>B1050 (S) Ahead</b>	33	0	49	3
<b>A14 (W)</b>	55	5	82	7
<b>Cycle Time (s)</b>	60		60	
<b>Overall Junction PRC (%)</b>	40.1		2.4	

6.5.16 The results presented above show that the proposed junction upgrade will allow the junction to operate within capacity in the future year scenarios with development, and therefore offers Nil Detriment when accounting for the impact of the proposed development.

## 6.6 Network Capacity summary

6.6.1 In summary, all junctions assessed within the study area are expected to operate within capacity in the future 2045 year with committed development plus the proposed development, with the exception of the A1307-A1050 Jughandle junctions and A14 J25. The A1307-A1050 Jughandle Junctions and A14 J25 are expected to operate within capacity accounting for the following proposed junction upgrade and mitigation strategy, all of which can occur within the public highway.

6.6.2 Phasing has not yet been established. However, the phasing will need to reflect the ambition to embed sustainable transport behaviours early and to push highway investments back and delivered subject to a Monitor and Manage strategy to ensure that they are absolutely needed. Trigger points for the implementation of works will need to be agreed with the approving authorities. Given long timescales for build out and changing economic and societal forces, it is important to be clear that measures and improvements are all subject to a Monitor and Manage approach, tested ahead of further decisions on mitigations.